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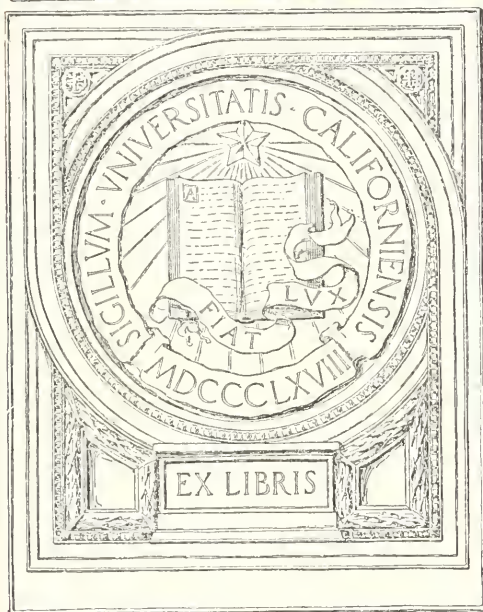


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Phonetic attraction.

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PHONETIC ATTRACTION.

*Thesis submitted to the University of London,
by R. J. LLOYD, M.A., Candidate for the degree
of Doctor of Literature, 1888.*

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ALPHABETICALLY TO VINDICATE
THEIR OWN RIGHTS
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PHONETIC ATTRACTION:

An Essay upon the Influence of Similarities in Sound upon the
Growth of Language and the Meaning of Words.

It is but seldom that the working hypotheses which are adopted by a science in its infancy are found to square with the observed facts which in process of time the industry of its votaries succeeds in amassing. First one conjecture is tried and then another, until at last one is found which cannot be rejected altogether, and upon this, by progressive emendations and extensions, a true theory of the science is gradually built up.

The Science of Language is no exception to this rule. It begins with wild guesses tracing back all language to some primeval agreement, to some divine revelation, to the imitation of natural sounds, or to a common source in the Hebrew. But none of these hypotheses were found capable of being riveted to the substance of the science by the necessary chain of facts. Its students were therefore compelled to descend to humbler methods, and to be content for a while to amass facts, and to bring out the empirical laws upon which alone higher generalizations can safely be founded. First of all the direct relations of the modern to the classical languages were studied and explored. Then came the discovery of Sanskrit and Old Persian; and thereupon the splendid generalization of Grimm gave a new interest to the study of every Aryan language, both ancient and modern. Philologists devoted themselves with enthusiasm to the task of following out that law into all its developments, and with pardonable zeal they would fain for a time have brought every word of every Aryan language under its immediate dominion. No equally great discovery has since been made, but a vast number of minor and local generalizations have

been successfully effected; physiology has been called in to give precision to phonetics, and to assist in formulating the laws of sound-change, especially in the departments left untouched by Grimm, such as the vowels, nasals, and liquids. Other investigators, following up certain exceptions to Grimm's law, have discovered and measured the influence of accent in the process of sound-change.

The net result of all these discoveries has been to give to the study of the Aryan languages a certain scientific basis, but not one of the highest, nor indeed at all of a permanently satisfactory, kind. They undoubtedly suffice to trace back a very large body of Aryan speech to a comparatively limited list of Aryan roots; but it is to be feared that in the absence of larger explanations they are often stretched to cover cases which do not fairly fall under them; and even where their application is most entirely satisfactory, the further question inevitably arises—Whence came the roots themselves?

Professor Max Müller, lecturing in London, a good many years ago, recommended that, for the present and provisionally, the Aryan roots should be accepted as ultimate facts: and in doing so he was probably right both from a scientific and from a practical point of view. The work which at that time lay immediately before the philologist was the perfecting of the empirical laws of the change and succession of spoken sounds in the Aryan languages, and during the progress of that work it was practically wise and scientifically justifiable to postpone the ulterior problem of the origin of roots.

But it is a problem which is sure to recur; for nothing is clearer than that Aryan language did not begin with a ready-made stock of Aryan roots. The roots themselves need accounting for, as well as the words which are their offspring. Professor Max Müller points, no doubt, in the right direction, though vaguely, when he says that we must view the roots of all languages as the survivors in a struggle for existence. He points out how vastly fewer are the actual Aryan roots than the number which the vocal elements of Aryan speech

are theoretically capable of producing: and he leads us to infer that the immense number of vacancies thus disclosed is due to the vanquishment and extirpation of the weaker roots by the superior energy of the stronger.

But how and why some roots flourish and some decay, why some are victors and some are vanquished, are questions upon which he declines for the present to enter. Circumstances, however, seem at length both to be bringing these questions again to the front, and also to be furnishing us with some contributions towards their solution. The introduction of a chronological element into philology has been fraught with great results. Derivations however plausible are not now readily adopted unless they are such as the conjunctions of time, place and history would reasonably admit of; and the result has been to discredit many rash and superficial guesses, and to relegate still more into a limbo of uncertainty. The confident expectation of tracing everything, or nearly everything, back in a straight line to Aryan roots has received a rude shock. Abysses of time and space are found to yawn between many modern words and any possible ancient prototype, quite too wide to be bridged by any imaginable process of transmission. Dr. Murray, writing in April of the present year, enumerates under the letter B alone no less than fifty-four words which he has failed to trace to any ancient roots, and which he concludes to be, for the most part at least, examples of more or less recent word-creation. He further remarks that that portion of the dictionary "contains many illustrations of the fact, which has of late years powerfully impressed itself upon philological students, that the creative period of language, the epoch of 'roots' has never come to an end. The origin of language is not to be sought merely in a far-off Indo-European antiquity, or in a still earlier pre-Aryan yore-time; it is still in perennial process around us."

Such being the latest and best conclusions of philology, there seem to be reasonable grounds for thinking that the

problem of the origin, nature and growth of roots need no longer be entirely ignored. If some roots are comparatively modern, and if their rise and development can be traced historically with some approach to accuracy; if moreover, we are enabled to gather from the history of acknowledged Aryan or Teutonic roots what are the conditions which respectively promote and hinder their influence and vitality, we may perhaps be able to apply the knowledge thus acquired to the general question of the origin of roots, whether Aryan or post-Aryan.

The most cursory comparison of the life-histories of various words reveals the fact that some words adhere to their original meaning with a vastly greater tenacity than others: and a further examination leads us to recognize readily two or three leading causes which contribute, by the degree of their presence or absence, to render that tenacity greater or less.

First among such causes must be placed precision of meaning and frequency of use. These, taken jointly, form the strongest possible bond by which words and meanings can be held firmly each to each. When both are present in a sufficient degree, all other causes, both friendly and hostile, may be safely left out of the account, except of course, the inevitable sweep of phonetic variation and decay.

Take for instance, in any language, the numerals and the pronouns. These both combine in the highest degree the essential attributes of exactness and frequency. They are incapable either of shading off into a series of adjacent meanings, or of being transplanted into distant fields by metaphorical uses. And we find in them accordingly a phenomenal longevity of form and stability of meaning, insomuch that they often remain as the landmarks of relationship between languages which have otherwise drifted apart in almost every particular.

It is best to consider these two qualities—precision and frequency—jointly, because separately they are almost powerless: the absence of one is generally sufficient to paralyze the other. Take, for example, the absence of precision; and

for that purpose let us institute a comparison between the names of the most frequently used numbers and names of the most frequently occurring colours. In point of frequency there is clearly little to choose; but we feel at once that there is a vast difference in definiteness and stability. There is no fear that the word *two* will gradually come to mean $2\frac{1}{4}$, then $2\frac{1}{2}$, then $2\frac{3}{4}$, and finally be transformed into *three*: but the word *blue* is used even now to cover a vast number of adjacent meanings: it shades off in various directions into colours which, at the point of contact, are as totally indistinguishable as in the long run they become totally different; and there was clearly nothing, until science wedded it to certain lines in the spectrum, to attach the term *blue* sharply to a certain area of colour, or to prevent it from slowly gliding into other fields, and attaining to a totally different signification. These apprehensions are fully confirmed by facts. In the classic dialect of English the wanderings of the term *blue* are comparatively narrow, but its Northern equivalent *blae* still varies in meaning from the blue-black colour of the blaeberry to the dull grey of unbleached cottons, and in former times it has been used to express the Latin *fulvus*, as well as the deeper brown of the compound *Blu-man*, a blackamoor. In old Spanish the same word takes the form *blaro*, and is found to mean yellowish grey! After that it is not hard to believe that the Latin *flavus*—yellow—is really, as phonetically it seems to be, the cognate of the old Teutonic *blauw-oz* blue, from which all the other words cited are ultimately derived.

The only way in which colour-words are found to maintain any historical fixity whatever is by association either with the tints of nature or the pigments of art. There is little danger at present of any change in the meaning of orange or vermilion: and such words as *azure* and *green* preserve a certain limited constancy, not by virtue of their forgotten derivations, but by traditional association with sky and tree. But until brought to an anchor by some such associations as these, the meaning of

colour names undergoes the most surprising fluctuations even in a very short space of time. Three centuries ago *auburn* meant whitish, and *drab* meant no colour at all (=F. *drap*, *undyed* cloth).

Frequency of use, then, is no guarantee of stability in the sense of words unless it is accompanied by precision of meaning: and conversely a large amount of precision will not save a word from corruption unless it is frequently used. Take, for instance, the verb which exists in Latin as *frui*, in O. E. as *brúcan*, in M. E. as *brouken*: its obedience to Grimm's law shows that it dates back to Aryan antiquity: it is actively used both in English and Latin, and so long as that activity lasts it preserves in both forms, in spite of long centuries of severance, an absolutely identical meaning. But in English its use at length declines: it is elbowed out of the way by foreign words, such as the verbs to *use* and to *enjoy*: and *pari passu* with the decline in its activity there sets in a perversion of its meaning. The word which in its active phase had resisted the changes of millenniums, passes rapidly through several gradations of meaning, and now, after three or four centuries, is only heard in the sense of *brooking* an insult or an injury, which is certainly very far from enjoying it.

Whatever be the cause of the inactivity of a word, whether it be pushed aside by busier rivals, or whether it is its misfortune to convey a meaning which rarely needs to be expressed, the result is the same: the word which is little used is easily perverted. Let it be understood, of course, that these remarks apply only to the current coin of popular speech: the terms of science are held to their meanings in a different way.

An apt illustration is here afforded by the verb to *buy*, and one of its derivatives. The old English verb *bicgan*, to buy, had a secondary and less usual form *ábicgan*, to abye. The original difference between them seems to have been one of emphasis rather than of meaning: the one meant to *buy* or *pay-for* (civilization had not yet dissociated those operations): the other meant to *buy* or *pay-for completely*, fully, out and

out. But there is for synonyms a law of differentiation from which they rarely escape: it is always hard for any word which is the synonym of a stronger one to survive very long except on condition of assuming some slightly different meaning, which is waiting and wanting to be expressed. In this case the second word was felt to be especially suited to express the religious ideas of *redemption* and *expiation*. It had for a time a great currency in theological literature, and thus worked its way back into the popular vocabulary under the double meaning of *expiating* an offence, and *suffering* or *enduring* a penalty. This last turn of meaning is probably due to the attraction of the verb *to abide*, a word at first totally unconnected with the verb *to abye*, except by its sound. The attraction set up by sound had been powerless, or at least unobserved, so long as the two verbs were separated by a vast gulf of meaning, but when once they were brought within the sphere of each other's sensible attraction, they rushed together and were merged, so that the one could hardly be distinguished from the other. Thus the verb *to abye* only escaped the usual fate of weak synonyms in one case in order to fall into it in another. It was useless to have two forms of the verb *to abide*, and the less frequent was discarded. The verb *to abye* no longer lives in spoken English, and is only used in literature as a conscious archaism.

The strongest bond, then, by which a word and its meaning can be attached together is that of frequent use and precise meaning. Words fulfilling these conditions constitute the solid foundation, the firm, bony skeleton of any language of which they form a part. But in the nature of things they are few, especially in languages which have attained to any degree of copiousness. The majority of words in any copious language are not of frequent use, and the majority of the meanings which the unscientific vocabulary aims to express are either indefinite in themselves or are prone to wander long and far under various metaphorical disguises.

Nevertheless, such words often possess a very high degree

of fixity, but it is attained in a different way. Influences which count for nothing with the stronger class of words are often quite sufficient to hold these weaker ones in their places with wonderfully enduring constancy. The strongest of these influences is that of phonetic association. Its operation is partly analogous to what we have seen of that of visual association in giving fixity to the meaning of colours; but it goes much further than that. Words are themselves sounds, and their relations with sound are not mediate but direct, not occasional but ever present, not necessarily intellectual or conscious, but often automatic—either by nature or by the effect of long use. The nature of these relations varies from the utmost simplicity to the highest complexity; but it is only in their simplest forms that they have hitherto received much attention. Much has been said about the influence upon language of the sounds of nature, the cries of animals and the interjections of men; but it will be the chief aim of this essay to shew that beyond these simple and obvious cases there is a less obvious but much wider region wherein phonetic association has also its sway, and produces far more notable results.

Nevertheless, our way to the complex must always lie through the simple, and it will be necessary to give some brief attention to the obvious cases named, before advancing to the consideration of the more complex phenomena.

There is an acknowledged difference in the expressiveness of words, a difference which all men feel but few ever attempt to analyse. Upon what, then, does expressiveness depend? Clearly upon the vividness and completeness with which the spoken word recalls the act or thing which it is intended to express. Now what power has a word to call up images of this kind, and whereby is it attained? Some writers have maintained that there are certain instinctive interjectional cries which are linked by nature with the expression of certain emotions. But however that may be, it seems certain that these natural roots, if existent, are exceedingly sterile. They

do not lead up to any nomenclature of emotions, our names for which, such as *anger*, *hate*, *affection*, *envy*, are almost uniformly drawn by metaphor from the external world. Neglecting these, therefore, as doubtfully existent and certainly unimportant, we may say, generally, that the expressiveness of a word lies in the strength of its associations with the act or thing which it is intended to represent.

The word itself, of course, is clearly incapable of recalling by direct and immediate association anything except things of like nature with itself. It contains in itself two elements—voice and articulation—the one phonetic and the other muscular: and it has thus direct associations on the one hand with similar phenomena of sound, and on the other with similar phenomena of force and motion. Beyond this it cannot directly go. Of these two classes the former is by far the most numerous and definite: the number of natural sounds having some affinity to the sounds of the voice is very great, and the resemblance often very clear; but the movements of the vocal organs and the breath, so far as they are seen and felt in ordinary speaking, offer but few and mostly vague images of the phenomena of external motion and force. The former class will, therefore, when we come to deal with them, claim our first attention, but reasons will be adduced for suspecting that the latter by their directness exercise a subtle influence of great power.

When we once pass from direct to secondary association, the step may be taken in either of two different directions. Given a certain sound in nature, and a certain more or less exact counterpart of it among the sounds of the voice, we may pass by secondary association, either on the one hand to those other external phenomena which associate themselves most firmly with the external sound, or on the other to those vocal utterances which, though not identical with the given words, are of exceedingly similar articulation.

There is, for example, a certain kind of sound in nature which we represent imitatively by the word *crack*. Between

the spoken word and the natural sound there is a direct and strong association; and that association is capable of being extended by a second link in either direction. Now, what are the strongest links on either side? On the side of the external sound the strongest connection which it has to offer is that which binds it to the phenomenon with which it is most frequently associated in nature, which in this case is that of fracture or breakage: and by virtue of this the word, which originally meant only a noise like that of breaking, comes to mean breaking itself, and then by another link of the same kind it comes to mean the fissure which is the result of breaking.

But the spoken word has also its associations, of which the most elementary are those which bind it to all similar sounds, and especially to all words which in any degree resemble it. We are entitled to conclude, on purely physiological grounds, that the mere utterance of the word *crack* must partly reanimate in the organism the traces of all similar sounds to which it is already accustomed, such as *creak*, *crake*, *croak*, *crow*, *erock*, *crockery*, *crackle*, *crackling*, *cracker*, *cracknel*, and *crash*, besides many more in a less degree, whose resemblance is less striking.

It will probably sound paradoxical to say that of these two kinds of association the second is generally, and in the course of ages always, the more powerful in its influence upon the growth of language and the history of words. The other appears from an intellectual point of view so much more natural, reasonable, and even necessary, that it seems almost an absurdity to place it upon a level with random associations of sound like these, possessing a good deal more, apparently, of rime than of reason.

For the word random describes quite rightly the nature of this association, so far at least as the first link of it is concerned. Its complete randomness is not seen in the example given, because it so happens that nearly every word strongly resembling the word *crack* has some imaginable affinity

of meaning with it. But the same associations would have been momentarily kindled in the organism even if each of these sounds had happened to be wedded to an opposed, or an incongruous, or an irrelevant meaning. It is true that under those circumstances, the incipient association would in each case have been instantly snapped: the association attaching to the word on its other or intellectual side would have effectually barred the way to consciousness. A hostile meaning would immediately quench it, whilst an irrelevant or incongruous meaning would give it no point of attachment. Be this as it may, the first link of such an attachment is always formed inevitably, firmly, automatically in the organism, and that none the less that in most instances we never become conscious of it.

Such conclusions at least appear to be quite warranted by psychological facts. The association between similar words is in the hearer an association of sound with sound, and in the speaker an association of muscular motions with muscular motions. Such associations, if very exact or very habitual, are found to operate quite unconsciously. Their circuit seems to be completed within the ganglia of special sense, either without reaching at all to the cerebral hemispheres, or, at any rate, without reaching them in such a way as to emerge into consciousness.

Let us now turn to the other kind of secondary association—association not through form but through meaning. Closer examination will show that such associations are by no means so natural and necessary as we seem to feel them to be at first sight. The feeling of their naturalness and necessity is largely an aftergrowth, arising from habitude and phonetic identity. If they were really natural and necessary the same associations would always grow; but they do not. Take the verb to *crackle*, which is the frequentative and diminutive form of *crack*; it never gets beyond its original phonetic meaning: the sense of fracture or fissure is entirely wanting. But its absence is purely arbitrary, for the correspond-

ing French verb *craqueler* not only has the sense of minute fracture, but has it to the exclusion of the original sense of crackling.

The reason why we are disposed to make, relatively, too much of this kind of association is that it is necessarily, to some extent, intelligent and conscious. Between the sound we call a *crack*, and the phenomenon of breaking, or the thing we call a fissure, there is a gulf of meaning which can only be crossed by a very distinct intellectual act, an act so marked that the word may easily have continued, as many have done before, to be used in its original sense for scores or hundreds of years before anybody ventured to take the leap which mentally separates its secondary from its primary meaning. For the first meaning is one purely for the ear: to any other organ it conveys not a particle of information; but the secondary meanings address themselves to the sight, to the touch, to the muscular feelings; it is by these that we appreciate and understand both the act and the results of breakage. These are not only not phenomena of sound, but they have not, of necessity, any scrap of connection with it. Now, though it is easy, as already pointed out, for impressions of the *same* sense to link themselves automatically together without the intervention of consciousness; it is rarely, indeed, that such connections can be effected between impressions of different senses without the conscious co-operation of the mind. What few connections of that kind exist are of a very fundamental kind, and seem to be implanted by nature to minister to our most elementary perceptions and wants. But in all ordinary cases the impressions of diverse senses cannot be linked in the lower nerve-centres; connection fails altogether to be established, except through the brain and the mind.

Thus it comes to pass that the attraction to which words are subjected by contiguous meanings makes a much greater show in our minds than the attraction due to neighbouring sounds. The steps to which the first leads are few,

great, and conscious, but the second is a gentle, invisible, but unceasing and self-multiplying force, whose influence we are prone to overlook altogether until it becomes too palpable to be neglected, and then we commonly set it down to entirely different causes. This will be seen more fully later on: enough has perhaps now been said to justify provisionally the division of the subject hereinafter adopted. Its fuller justification will probably be attained when the arguments here foreshadowed have been discussed more amply in their proper order and the validity of their conclusions has been brought to the decisive arbitrament of facts.

It is proposed, then, to discuss the phenomena of phonetic association in its two first and most important stages, which we will continue to call, as heretofore, the primary and the secondary; it is proposed to divide the first of these into two parts relating to the direct expressiveness of words, firstly in describing sounds, and secondly in describing phenomena of force and motion: and finally, it is intended to divide secondary association into two parts, the first relating to the secondary associations of words on the side of sound, and the second on the side of meaning. Tertiary and remoter types of association will only be treated in those forms whose extreme force and directness permit them to be fairly grouped with the secondary.

Beginning then with the direct expression of natural sounds by spoken words, we find ourselves at once in a province where even the primary law of definite and frequent association, so wonderfully illustrated by Grimm, is only very partially obeyed. The process of phonetic transmutation, which in so many prominent instances fails completely after thousands of years of attrition, to weaken the bond between a primeval Aryan word and its meaning, has a fatal effect upon words whose meaning is itself phonetic: and the more purely phonetic the meaning the more fatal is the effect.

Were we to go, for example, and try to find an Aryan prototype for our word, *crack*, our search would be in vain.

We ought, if we found anything at all, to find a root GRAG or GARG, or something like that; but we do not. The nearest we find is GAR, to creak or cry, but we fail to find that it is connected with the English word by any vestige of historical filiation. We do find, on the other hand, a root KARK, whose affinity in sound is in itself enough to prove its want of affinity in history and family descent: and what it seems to show is this—that our Aryan ancestors were as much alive to the descriptive merits of a syllable like that as we are, and employed it accordingly.

And whenever we try to trace back to Aryan sources a word whose meaning is almost entirely phonetic, the result in nineteen cases out of twenty is utter failure. It is not hard to conjecture how this may be, and the exceptions themselves will be found to add force to our conjectures.

Let us attempt to follow in imagination the fortunes of the Aryan root KARK or KRAK, and to see if we encounter anything which would militate against its long stability. Let us suppose that it made its way in due course into the Low German languages. But in doing so it must pass inevitably through a certain phonetic transformation. It is transmuted into the form HRAH or, perhaps, HLAH: and it is possible that we see it still in the Gothic *hlahjan*, which is the old English *hlehhan* and the modern English *laugh*. But it is “a far cry” from *crack* to *laugh*. Why this great change of meaning? Well, it cannot be denied that the word had quite lost its first descriptiveness by being transformed into HLAH or HRAH: and to make matters worse, the far more descriptive forms KRAK and KLAH seem to arise by a kind of new birth in the Teutonic languages themselves. The old word is attacked and beaten on its own ground, and it only just manages to survive in one collateral meaning, which it luckily happens to express with greater phonetic propriety in its altered than in its original form.

Another similar survival is the verb to *whheeze*, O.E. *hwæsan*. This is said to be descended from the Aryan root KWAS, to

sigh, sob, or pant. Whether the sense of wheezing was strictly within the original meaning does not appear, but it is quite clear that when Teutonic tongues twisted it into *HWAS*, it became more descriptive of that meaning than it had ever been before; and it continues to live exactly in the degree and way in which it continued to be imitative.

Facts, therefore, seem to point to the conclusions which we might have suspected beforehand, that in describing sounds, men always in the long run prefer those words which imitate them most closely, and that in this province at any rate, there is an innate attraction which either draws form towards meaning or meaning towards form, so that here, at least, the empirical law of Grimm, and even the great law of definite and frequent association upon which it is based, are systematically eluded or defeated.

The same conclusions are illustrated in another way when we find that words with the same phonetic meaning are often found to have a much closer resemblance in different languages, than Grimm's law would warrant. When we place the English *clink* and *clank* alongside of the Latin *clangor* and the Greek *κλαγγή*; or the English *boom* or *cuckoo* alongside of the Greek *βόμβος* or *κόκκυξ*: or the M. E. *tinken*, with its modern offshoots *tinker* and *tinkle*, alongside of the Latin *tinnitus* and *tintinnabulum*, we illustrate strongly the failure of Grimm's law to maintain its hold over words whose meaning is mainly phonetic.

But it is only in words that are very markedly phonetic that these conclusions hold good in their fullest extent. It might be thought, for example, that the names given to the cries of animals would always be closely imitative, and that if names which were not imitative did, in fact, arise, they would be liable to be very soon supplanted by more expressive forms. And we do, in fact, find that this happens in most cases: the words *caw*, *coo*, *cluck*, *mew*, *purr*, tell their own story, and even the less happy imitation, *bleat*, finds a very close parallel in the Greek *βληχή*. But we have been

content in English during the whole historical period to express the noises of the ox and dog by the words *bellow* and *bark*, which are by no means closely imitative, if they are so at all. It is not because they are hard to imitate; the Latin *mugire*, and the Greek *μυκάσμαι* are palpable imitations of the noises of cattle, and parallel forms are heard even in our own nurseries, but they fail to unseat the established word.

Why is this so? It is simply that when we take a word to mean the cry of a certain animal its meaning is no longer purely phonetic: it is no longer a word like *hum*, *boom* or *buzz*, meaning only a certain sound whenever and wherever it is met with: it is confined to such a sound issuing from a certain source. This shows how slight a thing is sometimes sufficient to bring even words of strongly phonetic meaning under the regular laws of language.

Yet even *bark* and *bellow* may not be in the last resort entirely unimitative. They are said to be traceable to the Aryan roots BHRAG and BHAL, and in that case they are not originally the names of specific cries at all, but general names for certain kinds of sound. It is conceivable that the one arose imitatively from such noises as those of the tearing of leather, or coarse textile materials, and the other from those of resounding vessels, and the like. This, of course, is mere hypothesis, but the very powerful sway of imitation in the phonetic province justifies us in seeking an imitative origin for every phonetic word.

Let us now pass on to consider, briefly, the other sphere in which the voice is capable, though in a minor degree, of direct imitation—the region of force and motion.

It would be vain, however, to imagine that there is always a clear line of demarcation between this region and the former one. Such words, for example, as the modernly invented *puff* and *bang* have from the first a mixed imitativeness, partly of sound and partly of force and motion; and the case is further complicated by the ease with which even a purely

phonetic root takes on kinetic meanings by secondary association. This will be well illustrated when we come to discuss the modern word *boom* and its cognates.

It seems also pretty clear that modern English words are less capable of imitating nature on the kinetic side than those of the primitive Aryans. Those forcible utterances represented by us as KH, DH, and BH, are only very feebly represented by the modern *h*, or *th*, or *v*. One needs only to pronounce after the Sanskrit fashion the Aryan roots BHRAG and BHAL, already alluded to, or the still more forcible BHLA, to blow, and BHRAM, to hum or vibrate, in order to realize the weakness of our own vocal resources as compared with the energetic forms of former times.

It is not surprising, therefore, to find that words of kinetic meaning do not possess that mobility which phonetic ones exhibit, but may generally be traced back to distant Aryan or Teutonic roots; and also that the appearance of new roots developed by purely kinetic imitation is comparatively rare. Yet modern English words are not quite removed from kinetic influences or devoid of kinetic expression, as may be seen in several ways.

The trilled *r* is one of the most forcible utterances which survive in English: and the exaggerated use of it which is artfully made by the tragedian is the commonplace of satire. It is not unlikely that the historical growth of force in words like *arrant* and *arrogant* is due to their possessing this letter in a position where it must be forcibly trilled, *i.e.*, in a short accented syllable with a vowel following. This is seen still more clearly in the word *alarm*, where such a vowel is actually thrust into the word to facilitate a forcible pronunciation corresponding to its meaning.

It would be possible to extend this line of observation to more delicate shades of expression. The sound of the rolling *r* might easily be imagined to have some affinity with that of round bodies trundling and bounding along a flat surface, and might be fancied to account for, not the origin, but the

preferential use of the word *barrel* to represent a rolling package, *berry* a round fruit, and for *barrow* generally meaning a trundling vehicle. It might also be imagined that the vibratory nature of the trilled *r* has something to do with its general force as a termination, in giving to verbs a frequentative meaning. We hear no longer any trill in such words as *flicker* and *flutter*, but in the older *flikeren* and *floteren* it was evident enough.

So also if we take any very large family of synonyms, such as those which signify various kinds of tearing or breaking—*break*, *burst*, *bruise*, *crack*, *crush*, *fracture*, *infringe*, *rip*, *tear*, *snap*, *smash*, *rupture*, &c., we shall often find little or nothing in their etymology or history to account for their differentiation of meaning, and the temptation will be strong to imagine an influence in the sounds themselves which has led to their preferential application to express given shades of meaning.

No doubt our guesses might sometimes be right, but in the science of language, and especially in the obscurer parts of it, the conclusions of theory need continually to be checked by comparison with fact. No method which leaves this out of account is worth trusting for a moment, for nowhere has unchecked imagination led to more serious error.

We are here, therefore, in a region where our confirmatory examples must be either exceedingly numerous or exceedingly apt and convincing. When we see, for example, two parallel imitative forms like the words *bob* and *pop*, *bang* and *pang*, arising and growing side by side during the historical period, a careful comparison of these alone might tell us something about the natural difference in kinetic and phonetic expression between voiced and unvoiced consonants. In like manner the drifting apart under the eye of history, of words once absolutely identical, such as *astonish* and *astound*, *vindicate* and *avenge*, might lead us to assign some part of their divergence to the specific influence of the sounds in which they differ. English affords in one case a particularly large class of such instances, in the great number of competing synonyms created

by the preference of the South for the sound of *ch* where the North preferred to keep *k*. Why does *belch* expel the older *belk*? Why do the solid *bank* and the wooden *bench* agree to partition their common meaning between them in that particular way? Why does *dike* generally mean a solid mound while *ditch* generally means the wet trench out of which it was dug? These instances are of the valuable kind which alone are of any importance by themselves or in small numbers: but no doubt there are other cases where a large number of less decisive instances might lead to conclusions of a reliable kind.

There is reason to think that in one way or other systematic investigation might throw further light upon the facts of natural expressiveness, especially upon those of a kinetic nature, as well as on the obscurer of the phonetic ones. When one sees the old kinetic root GARBH, to seize, suddenly reviving in the English *grab*, with numerous less perfect copies like *grip*, *gripe*, *grobe*, *grapple*, *grasp*, none of which can be traced beyond English or its kindred Germanic languages, one feels that in spite of its obscurity, the study of kinetic imitation might, if pursued scientifically, yield noteworthy results.

In like manner when one finds the old English word *can*, a moderate-sized vessel of stone, wood, earthenware, or metal, and the imported word *canister*, a basket made of cane, both coming in modern times to mean a clattering structure made of tin, one suspects that there may be some lurking phonetic power in the old Aryan root KAN, to resound, as seen in the Latin *can-ere*, to sound, to sing, and the Greek *καναχή*, clangour: although it is quite unknown to earlier English as an imitative root.

But the facts which of all others seem suited to throw a flood of light upon the growth of roots in general, and of imitative roots in particular, are those concerning the growth of new words in modern languages in historical times, as revealed by recent researches: and in no language are these materials now becoming more plentiful than in our own. When we

look carefully at the long list of words which Dr. Murray has concluded to be mostly of imitative origin, we are struck at once by the fact that they are in great part not isolated words, but have come up in groups, owning a fairly strong resemblance to each other both in original meaning, and in their typical syllable or syllables. It would be premature to discuss these groups here, because they are intimately connected with the subject of secondary association, which we have yet to consider. But there is one word of great importance which is not involved in many such collateral relationships, and an account of it will form a fitting conclusion to the treatment of primary or direct representation both in its phonetic and kinetic aspect.

The word *bang* seems from Murray's Dictionary to be quite a recent one in literary English. Its first known appearance is in the middle of the sixteenth century; and its meaning is that of violent striking: the phonetic meaning is quite subordinate, but comes out more as time goes on. As its use is largely Northern, and the same word with the same meaning exists in Swedish, it is very possible that it came from Scandinavia in earlier times and led an obscure existence in Northern dialects for some time before it appeared in literature.

Further than this we cannot go. Its resemblance to the English *pang* and the Latin *pango* helps us nothing. The former seems to be only another recent English word like *bang* itself; its identification by Professor Skeat with the earlier *prang* or *prong* does not carry conviction: and the Latin form *pango* is precisely that which Grimm forbids us to identify with either *pang* or *bang* in English. Its real cognate, *jang*, stands ready to refute the relationship. Other Aryan connections are wanting, and when we refer to the Aryan roots BIIAG and BIIAK, which are its correct prototypes in sound, we find them to be associated with totally irrelevant meanings.

Two theories, therefore, and only two, are open to us respecting the entrance of the word *bang* into English.

Either it is of native English growth, or it crept obscurely into English dialects, and thence into literature: in either case it made its way by its innate phonetic and kinetic force, and not because there was any lack of older words to express its meaning.

The second of these alternative theories leads us to remark that the operation of direct association is very far from being confined to the invention of imitative words or roots. It is conceivable that *bang* is not originally English, but it is inconceivable that it was not recommended by its phonetic merits to popular use. We may often be quite able to trace a word to a foreign source, and yet, at the same time, be compelled to admit that it was its imitative power which recommended it for adoption.

This is pre-eminently the case with words which have entered the language through the popular, as distinguished from the literary, vocabulary. Hence, it applies with vastly greater force to words coming obscurely from the Keltic, Scandinavian, and Low German languages, than to those which are adopted, for the sake of the meaning, from the Romanic tongues or other literary sources.

One precaution is here worth observing. It is to consider always what was the probable pronunciation of the word at the date of its introduction. Many words will thus be found to regain an imitativeness which is lost in the modern sound of the word. The word *slough*, for example, as now pronounced, is not particularly expressive, but pronounced as in older English from Chaucer backwards, nothing could recall more naturally the noise of footsteps in clayey mire; and whether invented by the Anglo-Saxons or adopted by them, as Professor Skeat supposes, from the Keltic, its expressive sound must have mainly procured its admission into English.

Let us now take up the subject of secondary or indirect association, and begin, as arranged, with that branch of it whose importance is here strongly maintained and which

contemplates the extension of the primary association between a certain vocal sign and certain cognizable meaning on the side of the vocal sign, through the links which bind it to all similar sounds, and especially to all similar words to which the organism is already accustomed.

One instance of the effects of this kind of association has been already given, incidentally, and for another purpose, in the case of the words *abide* and *abye*. In every case of this kind there are really three links in the association, the link between meaning and word on the one side, between word and word in the middle, and between word and meaning on the other side. The extreme and practically unbreakable strength of the two external links will not be denied: it is the middle or phonetic link which demands our closer attention. Reasons have been given for thinking that that link is continually and unfailingly, though often unperceivably, offering or attempting to join the other two. It is too weak to effect that object by its own force, and still less can it do so if there is any repugnance or even a complete indifference on the part of the words to be connected. Let, however, but the smallest approachment take place between the meanings, and the connection is instantly effected; the words have thenceforward a power of mutual suggestion, which tends to grow continually stronger, and to lead to still further approachments unless defeated by other attractive forces of the same kind.

For it is usual for a word to have not simply one but many connections of this kind, some drawing it one way and some another; and it is by the resultant of these forces that the present drift of its meaning is largely determined. Sometimes, as in the case already cited, the influence of one strong and closely neighbouring word is so powerful as to overbear all others: at other times, and indeed generally, there are many competing influences tending to draw it in various directions. The result of all these tendencies seems to be best described by a physical metaphor.

Let each class of similar words be conceived as a group

of bodies having weight or mass, where weight or mass represent the importance or force of the word, as measured by its frequency of use and precision of meaning: let the distance at which these bodies are placed from one another represent the nearness or remoteness of their existing forms and significations: then the mutual and combined attractions of these bodies, as deduced from the law of gravitation, would be a fitting physical image of the phonetic attractions which are continually moulding the historical development of our language, and especially of our weaker words. The latter forces are as silent, as unremitting, and apparently as inevitable as the former, and the law under which all physical bodies attract each other, more according to their mass and less according to their distance, affords an excellent image of the way in which attraction is modified by the strength of the attracting word or words, and by the nearness or remoteness of their forms and significations.

This is, perhaps, better illustrated by considering the case of a word now first presenting itself for admission into the language, than by that of one whose relationships are already established, we cannot very well tell how. We are speaking, be it remembered, of popular words without any known literary antecedents, which alone are of any value to us in studying the pre-literary course of language.

It is evident that such a word would often, in one important particular, resemble those which we have already noticed as drawing their significance from their resemblance, more or less exact, to the noises of nature. They would have a similarity, more or less striking, to many known and familiar words. Those resemblances may be often even more striking than those which occur in nature, because it is always possible for one articulate sound to approach much more closely to another than to any inarticulate or semi-articulate sound of the external world. If the meanings of the words thus called up are such as to chime in strongly with that of the new candidate for acceptance, they give to it a warmth and colour,

and an appearance of familiarity and appropriateness which tell powerfully in favour of its acceptance and perpetuation : and *vice versa*. The more numerous and powerful is the group of words thus enlisted, the more will the entrance of the new comer be facilitated.

Nor will this influence be found to end there. It can still be traced after the full entrance of the word into the language. Shades of meaning, which are supported by numerous and powerful phonetic associations will be found to live, and other meanings to decay. Sometimes, even the whole meaning of the word will be drawn bodily aside by some powerful attraction. At other times the effect of this attraction will be noted as eminently conservative, enabling a group of minor words, by their mutual support, to preserve, in a body, a stability of meaning and a continuity of history which they would have been powerless to maintain alone.

These remarks have a pretty obvious bearing upon the theory of Aryan roots, but it is perhaps better to reserve any direct comments on that subject, until the propositions just laid down have received very ample illustration.

The negative evidence in support of them will be found to be quite as striking as the positive, and it is therefore proposed to give illustrations of Dissociation, as well as of Attraction. It will be shown how alterations, purely phonetic, such as a change of pronunciation, or even of accent, seem to loosen a word from its traditional moorings and set it drifting till it finds another anchorage : how the obsolescence of its resembling words has a precisely similar effect ; how the same word, in different phonetic surroundings, is drawn towards different types of meaning ; how different words of one identical meaning are slowly differentiated by their associations of sound ; and how the parallel existence of a strongly resembling or identical root may gradually fill with its associations words totally unconnected with it until all thought of their real or original root is utterly submerged.

Beginning then with some instances in which the entrance of a new word into English has been facilitated or perhaps procured by phonetic associations, let us first instance the word *booty*, plunder. Its first appearance is in Caxton, at which time the very similar word *boot*, profit, now only seen in the idiomatic phrase *to boot*, was still one of the best understood and most active words in the language. Thus one word makes way for another until at last a whole family is formed. The word *frisk*, for example, seems to enter English first as an adjective, meaning lively or blithe. Its adoption is countenanced by the old English word *fresh*, whose original meaning was much the same. Their joint presence opens the way for *brisk*, which emerges from some obscure source in the latter half of the sixteenth century; and that again may have aided the adoption of the French *brusque* shortly afterwards. The origin of the term *boulder* stone is exceedingly obscure, but it implies from the first the attribute of smooth roundedness which would derive phonetic colour from the older words *bowl*, *ball* and the numerous tribe to which they belong. The word *blot* is without any discoverable counterpart outside our own language. It is first found in 1325, and Dr. Murray suggests that it "may really be connected with *plot*," or may unite "a notion of *spot* with some words in *bl*—." The words intended are no doubt *black*, *blue*, and their cognates. These would give picturesque force to the first part of the word. As to the second part it is interesting to note that both *plot* and *spot* are used in Middle English in the sense of *blot*. They are both to be found within four lines of each other in *Piers Plowman*, B text, XIII, 315-8.

Nothing could illustrate better than this last example the heterogeneous nature of the associations which are sometimes fastened upon a word by its sound. We have here a word whose very birth, or at the least its entrance into English, was brought about by its phonetic resemblance to two or three quite sporadic words. The new word, by what

may be called secondary imitation, seemed happily to call up by its mere sound the joint associations of form and colour which go to make up its meaning: and its picturesque effectiveness secured it at once a lasting place in English speech.

Nor was this the limit of its vitality. Three centuries later the then thoroughly English word *blot* united its associations with those of the equally common word *botch*, a boil or pustule, and perhaps with some more, to sanction, or it may be to engender and produce, the new word *blotch*, a boil or eruptive patch on the skin. Here again the formative elements of the meaning are drawn from quite diverse sources by the mere force of sound.

Yet another instance is to be seen in the word *blurt*, which makes its first appearance in English at the beginning of the seventeenth century. It comes like the rest without any literary credentials, but it finds strong phonetic allies on the one hand in the great family of words which are ranged under the Ayran root BHLA, to blow, and on the other hand in the words *spirt*, *spurt*, *squirt*, and more remotely, perhaps, *snort* and *flirt*, and the obsolete *jert*, all signifying some kind of violent emission or projection.

Nor need we resort altogether to remote centuries and to vulgar speech to trace out, in some degree, the operation of the principle here contended for. When Cowper (*Iliad* xv. l. 485), speaks of "assuasive drugs," none but a very keenly critical reader feels the least doubt about his meaning. He clearly means drugs that *assuage* the evils of sickness. No one but an etymologist is in the least danger of misunderstanding him. For the meaning is not etymological, but imitative. Originally drawn from the Latin *ad* and *suadeo*, this word has happened, by its sound, to suggest another word so forcibly as to bear down etymology, and give it, even in the usage of those who must have well known its proper derivation, a meaning considerably removed therefrom.

We may readily conclude, from the last example, that if such things can happen in polite literature and in words of classical origin, they must happen much more frequently in the usage of the people, and in words which are without a literary history. The instances *blot* and *blurt* also are of very great significance. For they both seem to spring from sporadic and remarkably disconnected sources, and if phonetic forces when divergent in direction can effect so much, it follows *à fortiori* that the influence of a family of words, whose attractions of form and meaning all pull one way must be powerful indeed.

We are led thus to suspect the possible agency of phonetic attraction in quarters where it has not previously been thought of. It is seen to be quite possible that many words which we rank as derived from certain roots may really not have grown directly out of them at all, but may have come into existence independently. Their apparent connection is due to some accidental resemblance of meaning which enlisted some powerful family of words on their side, and thus procured first of all their currency in the language, and then their still closer assimilation to the family type.

If this suspicion be well founded we ought to see some traces of such a process within the compass of the historical period. We ought to be able to lay our finger somewhere upon a word of indisputably alien origin bearing indisputable traces of attraction towards some powerful word or group. Nor need we look long in vain.

The verb to *broach* comes now so near in form and meaning to some offshoots of the old Aryan root BHRAG, such as *breach*, *broke*, *broken*, that if our language had been without a history, etymologists would have unhesitatingly made it a member of that family. As it is, we know that its origin is totally different. Its real cognate in English is *brooch*, an ornamental pin, and both go back to the French *broche*, a brooch, a spit or a spike. To broach a wine-cask was properly therefore to thrust a spike into it in order to

arrive at its contents. But that is certainly not the metaphor which we intend when we speak of broaching a *subject*. If it was, there would still be good sense in talking, as our ancestors did, about broaching a joint when we prepare it for roasting, or broaching a horse when we apply the spur. The truth is that the original force of the word *broach* has been so overshadowed and obliterated by its phonetic associations with a powerful alien group of words that it has been utterly unable to survive except in those senses which admitted of being referred to this new root. To spur a horse, to spit a piece of meat, can only by a very forced metaphor be described as *breaking into* them: but to broach a hogshhead of claret or to broach a subject of discussion are expressions which ally themselves readily with the verb to *break* and its cognates: and it is in these meanings only that the word survives.

We here again arrive at conclusions having a manifest bearing on the theory of Aryan roots, but it will be better to abstain from following up that line of enquiry until we have examined the phenomenon of phonetic attraction from every point of view, and arrived at some approximate idea of its real potency.

It will be best to begin with the simplest possible cases, which are, of course, those in which two words only are principally concerned. In this class of cases there are again two pretty well marked kinds, the one consisting of those wherein the two attracting and attracted words are of no very different weight, and the other of those wherein there is a great difference.

We have had already one instance of the latter class in the verbs *abye* and *abide*: of which the upshot was that the weaker was virtually swallowed up by the stronger. And other instances are not hard to find, accompanied by not very dissimilar results. Few persons when they speak of the *burden* of a song, of a complaint, or of a story, imagine that they are using a word which was formerly quite distinct

from the old English word *burden*, and which by the mere chance of phonetic resemblance has been completely swallowed up by it. It is really the French word *bourdon*, humming, once applied to a kind of subdued droning accompaniment of minor voices to the principal voice, and recently reimported by us as the name of an organ stop. The two words are perfectly distinct in Chaucer and even Spenser, but from that point the less is lost in the greater, and it now lives only in what we imagine to be a minor sense of the more powerful word.

In another instance the weaker word still survives, but only in a sense dictated by the stronger, of which it now seems to be merely a derivative. It is the word *carousal*. Its original English sense is that which it bears in the name of the Parisian Place du Carrousel, namely, a kind of tournament or tilting festival. But there was already in English the closely resembling and frequently used verb to *carouse*, and hence in a little more than a century the other word also began to be associated with that meaning of drunken merrymaking, which is now the only one which it conveys to the popular mind.

But this utter absorption cannot take place when both words have a vigorous life of their own. The effect in that case exhibits a contrast which has again its metaphorical parallel in the physical world. If the examples just cited are like those of meteorites falling into and being lost in a planetary mass, the examples which follow will be found rather to recall the behaviour of double stars, chained indeed to a certain limited space by their mutual attraction, but saved from coalescence by their busy revolution round an ideal centre.

The two words *bout* and *about* would seem to the uneducated eye to be as closely and obviously connected as the words *round* and *around*. But that is very far from being the case: they originate from widely different sources, and owe their present intimacy altogether to phonetic attraction. The word *bout* really goes back to the old Aryan root *BHUGH*, to

bend, and its true English cognates are the word *bow* in its various senses and their numerous offspring. It properly means a bend or curve, but the influence of the very strong word *about* brings it during the Middle English period to mean a whole circumference, or complete revolution, and hence to signify periodical recurrences of various kinds. The word *about*, it is perhaps scarcely necessary to say, has no connection with the root BHUGH, but was evidently compounded, before the historical period began, from *á-be-útan*, *on-by-out*, that is to say, around or near.

The two words *behoof* and *behalf* now approximate very closely in meaning as well as in form, but this is not due to any resemblance of origin but probably to phonetic attraction. The use of *behalf* is originally adverbial or prepositional, with a genitive case in immediate proximity: *be healf* meant in old English by the half or on the side (of somebody). The modern phrase *on my behalf* means etymologically therefore simply *on my part*. But the meaning of *behoof* is much less colourless than this, as may be seen in its still living cognate, to *behave*: the earliest examples show the same strong meaning of duty or necessity. When the Northumbrian gospels wish to express that men *ought* always to pray and not to faint, they say that it is *behoflic*, behoof-like. What then has since happened? It would seem that a compromise has been effected, the stronger meaning growing weaker and the weaker stronger until something like an equilibrium is established. The phrase "on my behalf" no longer means simply "on my part," but "in my interest," and in the nearly equivalent phrase "for my behoof" the sense of duty is softened down to that of advantage.

Even in cases where the meanings are already closely allied phonetic resemblance has its effect in lending mutual support and stability to the members of the group. The word *afraid* has doubtless received greater expressiveness and wider use from the pronunciation *afear'd*, which connected it with *fear*: and *afraid* in its turn seems to have helped to

perpetuate the verb to *affright*, especially as a past participle. Yet none of these words have the least relationship beyond their sound.

In other cases the mutual attraction and support is at present confined to certain senses only. When we speak of a man *overtaxing* his powers the metaphor, though frequent, is not a very happy one; but it probably derives its felt expressiveness from the feelings obscurely evoked by its resemblance to *overtasking*. And when we say that a man is of a *brooding* disposition, may not our mental picture of the internal ferment be unconsciously coloured by the phonetic coincidence with the verb to *brew*?

The principles here laid down have a manifest application to the case of homonyms *i.e.*, words of identical sound but of different meaning. It happens, as a rule, that a pair of homonyms are widely different in signification: for if they approach very closely they either absorb one another, or they are found inconvenient and one of them is rejected. But wherever association is possible the one meaning does not fail to give colour to the other. We may know quite well that the two meanings of the English *broil* go back to two quite distinct French verbs *brûler* and *brouiller*, but when we read of civil broils, the heat and sputter of the other meaning enter in spite of ourselves into our mental imagery. We may be struck with wonder that the word *shoal* can represent two things so different as an assembly of fishes and a mass of sand, but we connect them mentally by assigning to the word *shoal* some meaning like that of mass or quantity, and thus quietly help to obliterate the fact that a shoal of fishes is the Old English *scolu*, a school, whilst a sandbank is a place where the water is *shoal* or shallow. Thus do homonyms, when once any imaginable community of sense is set up, draw each other irresistibly together and at last entirely coalesce. Few people imagine when they speak of *owning* a mistake, of having a *swimming* in the head, of *bidding* some one goodbye, of the art and *mystery* of some handicraft, of a

miserly old *screw*, or of a ship's timbers being *shivered*, that they are really using dead homonyms, which have been drawn and incorporated into the body of meaning possessed by another word by the force of phonetic attraction.

Quitting now these simplest cases of attraction, let us advance to those next in order of complexity, that is to say, those in which a word is subjected to the attraction of more than one resembling word. Such instances fall at once into two separate classes of widely different importance. The larger and more important class is that wherein the attracting words have a resemblance not only to the attracted word but also to each other; but there is a smaller and less frequent class wherein the attracting words bear little or no resemblance to each other: and it is perhaps best to view these first because they exclude, *ex hypothesi*, the operation of the bugbear called by philologists "popular etymology," which seems often in reality to be only the final stage of phonetic attraction.

Two apt examples of the kind in question have already been cited in another place,—the words *blurt* and *blot*: and the list might easily be extended. Let one very good one here suffice. The history of the word *tweezers* as disclosed by Prof. Skeat is very remarkable, and hardly explicable except by the force of phonetic attraction. It is really the French *étui*, a case, such as is used for holding needles, scissors or mathematical or surgical instruments. It appears as an English word in Cotgrave—"a chirurgian's case or *ettuy*." But the initial syllable soon fell off, as it did in the case of *ticket* and some other French words. It figures in fact in Sherwood's index to Cotgrave as "a surgeon's *tweese* or box of instruments." Such cases being generally made in two halves, connected like the backs of a book and folding face to face, we are not surprised later on to find Robt. Boyle writing "I drew a little penknife out of a *pair of tweezes* I then chanced to have about me." We furthermore read in the *Tatler*, Mar. 7, 1709-10, on the subject of toilet requisites,

“Then his *tweezer-cases* are incomparable; you shall have one not much bigger than your finger, with seventeen several instruments in it, all necessary every hour of the day.” That *tweezer-case* here meant a case for tweezers admits of no manner of doubt; and it is impossible not to concede Prof. Skeat’s inference that a *tweezer* was properly an instrument contained in a *tweeze*. So far, so good: but the explanation fails to show why the word was applied to this kind of instrument only, and not to any other of the multifarious contents of the *tweeze*. The above quotation does not justify us in inferring that *all* the instruments in the case were ever called tweezers. Had it been called a lancet-case we should not have inferred that they were all lancets, but only that some of the more important instruments bore that name. And the strict limitation of the term tweezers is well shewn by the contemporary evidence of Phillips (*New World of Words*, 1706) who gives the word tweezers with this one meaning,—“nippers or pincers, to pull hair up by the roots.” Now why did the name settle at once upon this particular instrument and not upon the others? It seems to be a clear case of phonetic attraction. The new word called up a sound-picture of the instrument *seizing* and *squeezing* its object and *twirling*, *twisting*, *tweaking* or *twitching* it forth. Whether the sound is naturally as well as secondarily imitative we will not discuss; but the A.S. *cwisan*, *tó-cwisan*, to crush, to squeeze, are worth comparing.

But it is not in cases like this that phonetic attraction usually displays its power. The cases where diverse attractions thus happily co-operate are naturally rare: and when several words exert a sensible attraction upon another it is usually because the attracting words are all of the same phonetic type, so that their attractions all pull one way.

In this, as in the previously noticed classes, phonetic attraction may be studied in every stage of intensity, from that of remote suggestion and hardly conscious colouring up to the most complete assimilation. Few people imagine when they

use the word *bondage* that they are employing a word which had originally no connection with binding or with bonds. Take away those associations and there is nothing, absolutely nothing, left behind: the word is quite emptied of its meaning. Its form too is so regular that, if *bondage* had been without a history, we should have thought it absurd to trace it to any other source than to the family which clusters round the English verb to *bind*, and the Aryan root BHADH or BHANDH. It is now, indeed, to the popular ear at least, a fully adopted and admitted member of that family, but its real parentage is utterly different.

Bondage is really, in mediæval use, whether English, French, or Latin, a kind of tenure in villenage, that is to say, not on condition of military service, but of cultivation and the sharing of produce: it derives its meaning from A.S. *bondu*, a cultivator, which is modelled in turn upon the present participle of the old Northern word *búa* to occupy, *i.e.*, to inhabit (a dwelling) and to till (the land attached to it). Faint traces still remain to us of both senses in *boor*, a cultivator, and *hus-band* the occupier of a dwelling, as well as in *hus-band-man*.

When villenage died out the nature of bondage became obscure, the wide distinction between it and slavery was lost sight of, and its meaning was at length fully governed by the phonetic suggestions of *bind*, *bond*, *bound*, and their allies.

A milder instance of the same kind of attraction is seen in the word *belfry*, which originally had nothing at all to do with bells or even with church towers, but was the name of a besieging engine of tower-like shape. So *bloat* seems originally to mean to soak or soften, but its resemblance to the verb to *blow* and its subordinates brings it to the quite different meaning of puffing out, or of causing to swell by puffing out.

There is a danger in adducing instances of less marked degrees of attraction lest they should be thought fanciful, but it can hardly be wrong to point out that the mental picture raised in English by such a word as *barricade* is quite

uninfluenced by the French *barrique*, or the Italian *barrica*, whilst the English *bar* and its relatives are strongly appealed to. It is probable that to the English mind a barricade is an obstruction of a very indefinite kind, whilst to the French or Italian it would hardly be possible to mentally construct it without the specific presence of empty barrels or boxes.

So also when we find the meaning of *brink* slowly verging from that of *slope* or *declivity* to that of *abrupt edge*, we suspect an occult attraction which is, perhaps, that of the family of words of which *break* is the type. The nasal would be no impediment to the ear in forming such an association; there is a clear connection between *click* and *clink*, *clack* and *clank*, *tick* and *tinkle*.

This tendency in words to gravitate towards strong groups of pre-existing words is sometimes so strong as to draw not only isolated strangers, but even sometimes to detach the members of other groups from their more rightful but weaker connections. The word *bondage* has already furnished us with one instance of this kind, but it is possible to find instances which are yet more impressive, because all the words concerned are still alive before our eyes.

The verb to *demean* is not without living cognates. The noun *demeanour* is enough to show exactly what it ought to mean: to demean oneself is to conduct or behave oneself in some particular way,—whether well or ill or indifferently can only be determined from the context. It has obviously nothing to do with the powerful adjective *mean* and its derivatives. Yet the attraction of that group has been so strong as utterly to corrupt the meaning of the word. To demean is now to disgrace oneself, to do something derogatory, to stoop to some menial or even dishonourable function. This change is usually set down to “popular etymology,” but that theory will hardly suffice when we find the new meaning countenanced by comparatively careful and instructed writers like Kingsley (*Saint’s Tragedy* III. 4, 176). Philologists do not seem to reflect, when talking about the dire effects of popular etymology, that Demos

is not an etymologist at all. It is true that he effectually dictates the meanings of popular words and makes them into current coin whether they bear the hall-mark of the etymologist or not. But he does not do this according to the promptings of a perverted or any other etymology. He is really guided by the felt impressiveness, the picturesque power of words, in short by their capability to call up a lively image of their meaning in virtue of their phonetic and other connections. It is not till the whole thing is done that any thought of etymology arises, and then it arises only on the part of the etymologists themselves. Judicious writers and speakers accept the situation without attempting to fasten on Demos a process of derivation which never entered into his head.

The word *tidy* again has been quite as completely drawn away from its real cognate *tide*, as *demean* from *demeanour*. The A.S. word *tīd* is exactly preserved to us in Whitsuntide, eventide, &c.,—the *time* or *season* of Pentecost, of evening, &c. Hence *tidy* is really synonymous with *timely*: its primary meaning is seasonable, appropriate. Its steady drift towards the meaning of physical neatness is hard to account for, except on the ground of some steady external attraction. That is perhaps found in the associations of the powerful words *tie*, *tight*, and their comrades, which in nautical use have strong suggestions of external neatness; and there is an appropriateness in these suggestions which seems to make them natural in a more extended sense.

Sometimes a word is drawn aside even by the associations of a minor unaccented syllable, particularly if it be the terminal one. When a terminal syllable happens to resemble one of those which the language has appropriated to the office of suffixes it brings the word into a certain phonetic similarity to a very large number of words bearing that suffix, and the result is sometimes a very surprising modification of its meaning.

The word *burial*, for example, exists in the oldest English in the form *biriels*, a burying-place: but the *s* was mistaken

for a sign of the plural, the *el* was identified with the Romanic suffix *al*, as seen in *withdraw-al*, *betray-al*, &c., and thus *burial* has entirely ceased to mean a burying place, and has come to mean the act or ceremony of burying.

So also *bridal*, which is properly *bride-ale*, a wedding feast, has come to mean the act or ceremony of marrying.

A less palpable instance is seen in *bicker*, a word which in early use is applied to stern and violent contests, but which seems to owe its gradual weakening of meaning to the termination *-er*, so often associated in verbs with a petty and frequentative signification.

There is another class of instances where a converse process seems to have gone on, the termination having been somewhat modified to give better expression to the meaning: it is the class of augmentative words whose French termination is *-on*, and Italian *-one*. If these words succeed in maintaining the accent on the last syllable their English termination is *-oon*, as in *balloon*, *bassoon*, *doublloon*, but if not, it is *-on*, as in *baton*, *button*, *battalion*. Comparing the two sets of instances one hardly feels it unlikely that the meaning had something to do with the fortunes of the termination; the words which had to express a big or imposing meaning perpetuated the imposing termination. It is significant that *baton*, so long as it meant a good stout cudgel, preserved the form *batoon*, but when it came to mean a little wand, it subsided into the unobtrusive *baton*.

Besides all these classes of instances there are others wherein the force of phonetic attraction is not strong enough to enable one word to draw another directly towards itself, but is yet able to give either a marked deflection or a palpable addition to its meaning. The word *blazonry* has nothing whatever to do with *blaze*, but it conveys an irresistible impression of brilliancy: the word *bower* has no connection with *bough*, but we always figure it mentally among the trees: we may know very well that a *bandit* is not necessarily a member of a *band*, yet a solitary bandit would seem an

incongruity: the etymology of the verb to *aspire* does not contain the slightest hint of upwardness, but that notion is unconsciously added by the upward-pointing *spire*.

And there are doubtless a vast number of cases wherein the meaning of words receives additional colour from phonetic influences, though at the same time we are quite unable to lay our finger at once upon the attracting word. If, for example, the attraction is due, not to one word or class of words, but to several sporadic and unrelated influences, it may be next to impossible to trace out these severally unimportant forces. The result of the attraction may be plain, but the causes may not be definitely discoverable.

It often seems to happen that the history of a word exhibits a steady but unaccountable drift in the direction of an altered meaning: and it does not seem too much to infer from all the evidence which has now been adduced that the cause of such a drift is really very often phonetic attraction. Take the common adverb *apace*: it is the French *à pas*, at a (good) pace. But it seems to be a fact, although unnoticed in the "New Dictionary," that this word did not at first imply haste or speed. There is an example in Chaucer (*Troilus II.* 89-90), and another cited by Prof. Skeat from the *Canterbury Tales*, where it may imply a *steady* or *continuous* pace, but most certainly not a quick one.

What are we to say about a case like this? The subsequent drift of meaning is as unaccountable as it is clear. We look in vain for any word sufficiently approaching it either in meaning or phonetic type to account for the rapid strengthening of its signification. We find numbers of words of remoter resemblance, such as *race*, *chase*, *haste*, which we might imagine to have been concerned in the matter: but this is mere conjecture, and can hardly lead to results of any specific value. Nevertheless it is important to remember, what may now be taken to be proved, that most words are surrounded by an atmosphere or firmament of attractions which whether determinable or indeterminable, exert a powerful influence on their history.

That principle may be further illustrated by cases where the effect of an outside word or words has been not to smuggle an additional meaning into another word, but to bend it from its original intention into something slightly different. The French word *bonté*, kindness, goodness, is in that language chained very firmly to its place by the formidable adjective *bon*, good; but the former word enters our language in the form *bounty*, and it comes without the latter: the result is that its meaning begins to drift: it is probably influenced by the companionship of the words *abound*, *abundant*, &c.: its meaning becomes that of charitable generosity. Nor does the movement thus set going among these words terminate with themselves: it spreads to the word *boon*. We do not imagine now-a-days when we hear of things which are "a boon and a blessing to men" that a boon is properly the Old Northern word *bón*, a prayer. If it afterwards comes to mean the favour prayed for, and finally to mean any good thing which might be prayed for, the intellectual sliding here disclosed is not uncaused and motiveless, but largely the result of phonetic attraction: and we shall not arrive at a sound understanding of changes like this until we view them not only on their intellectual but also on their phonetic side.

Similar instances of the deflection of words might be multiplied. The word *baffle* conveys to us the meaning of unexpected defeat, and defeat implies conflict or attack. But its original meaning has nothing to do with conflict: it means to revile, disgrace, or belittle a man. It only drifts into a meaning associated with conflict, by the constant suggestion of *battle*. It is probable in the same way that *auburn* (*alburnus*), which was formerly accented on the second syllable, and *burnish*, which is originally to make *brown*, owe some of the brilliancy of their English meaning to association with *burn* and its compounds.

Here, again, there are, doubtless, multitudes of other less palpable cases which we may be certain to exist, although they

clude specific investigation. The word *balderdash*, for example, signifies originally a kind of liquor; but it would be profitless to attempt to guess the attractions which have gradually drawn it into its present meaning, however sure we may feel that some of them at least were phonetic.

Sometimes, but more rarely, phonetic association takes effect upon the form of words, and not upon their meaning. *Amaranth* is properly *amcrant*, but the suggests of *polyanth-us*, *helianth-us*, &c., have been too strong for it: the common word *tight* begins at first with a *th*, but the phonetic influence of *tie* transmutes it into *t*: *twit* had once a long *i* for its vowel, but is perhaps shortened by *twitch*: *bat*, a winged animal, in Middle English is *bakke*, the change being perhaps due to its *beating* the air: and *mate*, a companion, in place of the long established form *make*, is perhaps partly due to concurrent associations of *meet*, adj., and *meet*, verb.

The contrasted phenomena of Dissociation have already been incidentally touched upon, especially in case of the attraction of words out of one family into another: but it now demands a fuller treatment.

It is surprising how small a phonetic change will effect a great dissociation. It may be in the pronunciation: the word *one* undergoes historically a remarkable change in sound, and straightway the word *at-one* loses half its meaning: the word *chary* adopts *ch* where it formerly had *c* or *ce*, and forthwith its relationship to *care* is totally forgotten: the word *brid* (doubtless from resemblance to *breed* and *brood*) long signified *young* birds, fledglings, but when it changed to the less similar form *bird* it easily spread its meaning further: the French *brunir*, to embrown, was able,—when it changed its form to *burnir*,—to shake off the close association of colour and assume the meaning of burnishing as well as bronzing: the Latin *bullire*, to boil, gives birth to an Italian verb *bulicare*, very expressive of lively ebullition, but the same line of descent, carried through the French *bou(l)ger* to the English *budge*, yields us a word wherein all thought of boiling is

forgotten and the motion denoted is not at all lively but unwilling and slow. Compare with this result the Aryan root BHUGH and its Sanskrit derivative *bhuj*, to bend, to yield.

Sometimes a mere change of accent is enough to effect the dissociation. Few people habitually remember that the words *antic* and *antique* are in their origin absolutely identical. The simple change of accent has cut the former quite away from its cognates and allowed changes to supervene which, if the accent had maintained its place, would have been manifestly impossible. A similar thing seems to happen in the pair of etymologically identical words *aggravate* and *aggrieve*. The former is at once seen, according to the well known rules of Romanic philology, to be a learned, and the other a popular, form. But, contrary to the general rule, the more regular word has in English the more forcible meaning. The explanation seems to lie in the accent; the accented syllable of the one happens to recall the very forcible root AG, of which many offshoots such as *agony* and *antagonist* are familiar in English, and it thus acquires an adventitious poignancy which enables it to outlive its old compeer.

Sometimes again dissociation takes place because the words which once afforded to another its firm anchorage have become almost or altogether obsolete. One excellent instance has been given already in the case of *bondage*. Another is afforded by the adjective *wo-begone*. The picture which that word calls up to us is that of one given up, self-abandoned, to wo. But the latter part of it is really the past participle of the old verb *be-ga-n*, to *be-go*, i.e., to surround or encompass, and was undoubtedly intended to call up a somewhat different image.

Another kind of dissociation has been already hinted at in the case of the words *bounty* and *barriade*; it is that which arises when the same word is exposed to the phonetic surroundings of two different languages. If the connection suggested by Prof. Skeat between English *agoy* and French

à gogo is real, nothing could better display the extreme distance to which twin words may be drawn apart under such circumstances. The English word, under the powerful influence of the verb to *go*, acquires a very active and bustling meaning, whilst the French one seems to fall into the hardly weaker hands of the word *goût* and its surroundings, so that *vivre à gogo* is to live as one pleases, to be in clover or at ease.

The same principle again is illustrated by the case of doublets, *i.e.*, of words etymologically identical which have gradually come to express different meanings. When pairs of words such as *clip* and *clasp*, *grobe* and *grasp*, *smile* and *smirk*, which once expressed identical meanings, are found to drift apart, it is not unnatural to seek an explanation in that very difference of form which alone makes at first any distinction between them. For difference of form means to some extent difference of phonetic affinities and therefore difference of history. The word *grasp* is at first a mere derivative and duplicate of the verb to *grobe*, but its altered form brings it into phonetic relationship with *clasp* and *hasp*, which in turn revive its affinity with its ancient cognate *grip-en*, A.S. *gríp-an*, to grip: and so the alteration of form draws after it a still greater alteration of meaning. The case of *smile* and *smirk* is not very dissimilar. The first is Scandinavian, the second Old English; they meet as competitors of identical meaning upon Middle English ground: but in modern English the associations of *jerk*, *quirk*, and others, seem to have degraded the Anglo-Saxon in favour of the Northern word.

Some instances have already been given, such as *bout*, *demean*, and *tidy*, where words have been drawn very far towards an alien root, but it is possible to give instances of complete dispossession: the alien word has not simply drawn the other out of its original place, it has planted itself in its seat, usurped its office and obliterated its remembrance. No one, when he thinks about it, doubts for a moment that the words *accord*, *concord*, and *discord* are derived from the Latin

cor, the heart: but it is equally certain that no ordinary man, and perhaps very few scholars, are at all reminded of *cor*, the heart, when they use those words. The metaphor which they each and all recall is a musical one,—harmony or the want of it. Whence this strange concurrent deflection? Clearly from the Latin *chorda*, the English *chord* and *cord*. The associations of that totally disconnected root have dispossessed the original *cor* to such an extent that the latter counts for nothing and the former for everything in the picture which those words call up.

When we speak of a man being *cashiered* the picture called up in the mind of the hearer is that of his being dismissed from his employment and paid off by the *cashier*: but it is really a quite different word, being in fact the French *casser*, imported by way of Holland by the soldiers of Elizabeth. The Dutch form is *kasséren*, and the earliest English forms are *casseeer* and *casheer*. But both of them have at first the full meaning of the French *casser*, to break up, to annul, as well as to discharge. Its subsidence into the last sense only is due to the complete expulsion of its original associations by an utterly alien word.

The word *blunderbuss* is properly the Dutch *donder-bus*, thunder-box, the name of a Dutch fire-arm: but to an English ear the word *donder* did not so immediately suggest *thunder* as *dunder-head* and its revised version *blunder-head*, both of which were already current in the language. The perversion thus suggested doubtless received countenance, as indicated by Dr. Murray, from the random firing of the weapon, and the displacement of *donder* by *blunder* was soon complete.

The word *blindfold* again would certainly not be used to-day of any one who was really blind, nor of anybody except one whose eyes were bandaged: but it originally means one who is really blind, and it has nothing whatever to do with bandaging. Had it come down to us in a regular form it would have been *blind-felled*, smitten or struck blind. Here again an alien word has completely ousted the original possessor.

Having thus illustrated in its chief aspects the behaviour of individual words under the influence of phonetic attraction, it will be interesting to note its effect upon the growth and fortunes of families or groups of words. It is now obvious that the leading result of this attraction must be to consolidate and enlarge, perhaps even to create, such groups. The instances adduced will not have conveyed to us their right impression if we are led to imagine that phonetic attraction is in its normal operation an innovating force. The most noticeable effects of physical gravitation are the downfalls and crashes which it produces from time to time upon the surface of the earth, but they are all simply nothing to the statical energy which it continually and unobtrusively exerts in holding the framework of the globe together. So likewise the great families of words which in many cases have descended to us not only through all history, but through an almost inscrutable antiquity beyond, may perhaps be found to owe their wonderful solidarity and family permanence not really to etymology but to the force of phonetic attraction.

The theory of Aryan roots in its present uncompleted condition is quite as unsatisfactory as any which has preceded it. Max Müller in his Lectures pours well deserved ridicule upon the hypothesis of a congress of hitherto speechless sages assembling to discuss the invention and promulgation of language : but when he enlarges upon the predicative nature of roots and the very highly general or abstract nature of the ideas which some of them express, does he not render it equally incredible that language in its ruder stages ever built itself consciously upon such roots? Yet so long as we continue to follow his (excellent temporary) advice and continue to regard Aryan roots as ultimate facts, it is almost impossible to avoid that implication.

The habit of tracing back all or most words to the hypothetical Aryan forms of a far-off antiquity gives to the latter an air of infinite priority and remoteness. The habit of calling these forms *roots* gives to words the appearance of

having grown out of these roots, although we have in many cases no knowledge whatever of such a process. The habit of talking of them as if they had a real and separate existence leads us into some danger of assuming that words of a very highly abstract meaning formed the staple vocabulary of a barbarous people.

It cannot be too steadily kept in mind that an Aryan root is simply the syllable or sound in which a number of post-Aryan words of nearly related meaning are found, after due allowance for the regular divergence of sounds in language, to agree. It is to be feared that many etymologists, consciously or unconsciously, regard the relationship between an Aryan root and its associated words exactly as they would regard the relationship between the English words, *amour*, *amity*, *amiable*, &c., and the root of the Latin *am-o*. In other words, they seem to be always implying that the words are *derived* from the root. But there is not the least justification for such an assumption. It is quite as feasible, when we look into the evidence, to suppose that the root was derived from the words, as that words were derived from the roots. It is not a case of literary derivation at all, but simply of a resemblance in form and meaning, of whose origin we know nothing whatever, except perhaps, that in all likelihood it was *not* literary.

Let us take, for example, a root which has already been incidentally mentioned, the root BHRAG, and let us briefly examine the large class of words which in any way resemble it or its offshoots in form and meaning. They will be found to fall into several very remarkably distinct categories. In the first line we have the English *break*, the Latin *freg-i*, and the Greek *ρήγ-νυμι*, of which it is perhaps more correct to say that their radical syllables are allotropic forms of the root BHRAG than to say that they are derived from it. Then we have a second class wherein this root has been somewhat modified by known inflectional or other influences, such as the English *broken*, the Latin *fract-um*, and the Greek *ἐρρωγός*, all meaning broken. After these come two sub-classes of palpable derivatives,

the one from the unmodified, and the other from the modified, stems; such as *frag-ile* and *frag-ment*, *break-age* and *break-able* of the first named class, and *broken-ly* and *broken-ness*, *fract-ure* and *fract-ionally*, or the Greek *ῥωγας*, cloven, and *ῥωξ*, a cleft, of the other class.

Up to this point all is plain sailing; the words have all a real and a direct etymological connexion with the root BHRAG; but below these we find three very important classes whose connexion with it is either indirect, or conjectural, or purely phonetic. And beyond these again there is a very important body of unclassified words, which are freely assumed by some etymologists to be cognates, not because they are seen to obey any regular formative rule, but because they exhibit some general phonetic resemblance and because our ignorance of their antecedents relieves the hypothesis of derivation from the possibility of being absolutely confuted.

First of all then, after the four classes of direct cognates, come those whose relationship is real but indirect, of which we have apt instances in English in the noun *brick* and the verb *bray*, to pound or bruise. These are, of course, the French *brique* and *braire*, but French in its turn derived them from the Teutonic forms *brick* and *brech-en*, which are the close relatives of our own verb to *break*. When therefore the words *brick* and *bray* made their way into English, and into close companionship with the verb to *break*, they were but wanderers returning home again. But at the same time we must clearly understand that they returned entirely in the guise of strangers and that, if their adoption was aided by the verb to *break*, it was purely by associations of sound and meaning, not at all by etymology. They would have stood exactly the same chance of adoption if they had been totally unrelated.

Next comes the class whose etymological relationship to the root BHRAG is more or less conjectural. We have already given reasons for thinking that the meaning of the word *brink* is influenced phonetically by those of the *break*-class. We traced it back to a Scandinavian source, and there

is just a possibility that it may go beyond that again to the root BHRAG; but it is a pure speculation. The case of the adjective *brittle* is still more instructive. It goes back to the Anglo-Saxon *breat-an*, a synonym of *brec-an*, to break, but the identification of these two verbs with one another is a step of very doubtful propriety. We have no knowledge whatever of any process by which the one verb could give birth to the other; and if we ascribe their parallel existence to phonetic attraction, which is a cause capable of exactly accounting for them, we shall act much more scientifically than in assuming derivations of a type for which we have no vestige of authority. It is true that we can trace out types parallel to *breat-an* in all the Scandinavian languages, but that does not affect the matter. If we could trace it back to the primeval Aryan it would still remain more probable that the two roots had attracted each other into parallelism than that either had given birth to the other by any process of derivation. The converse influence of the same attraction is well seen in the temporary development of a form *brickle*.

There still remains a class of words which though perhaps strongly influenced by the root BHRAG in virtue of its phonetic alliances are really known to be of historically diverse origin. The word *broach* has been already instanced; and to this may be added the word *fractious*, which Professor Skeat traces back to the Middle English verb *fracch-en*, to squeal. But it would be idle to dispute that the modern use of *fractious* is far more determined by its phonetic allies, such as *refractory* and others of the BHRAG class, than by its real ancestor, *fracch-en*, to squeal.

We now come to that residuum of instances which clearly do not belong to the first four classes, but which we have hesitated to distribute among the three last classes, because etymologists seem generally to speak of them as if they were, in the ordinary and direct sense, *derived* from some word or words of the BHRAG type. In Greek there is the word *ῥηγμίν*, the surf, the water's edge, the brink (of anything).

This has very much the air of a compound, and if any distinct force, either independent or formative, could be assigned to the second syllable it might be admitted to be such: but in the absence of evidence it is better to consider such a word as having indeed strong phonetic affinities with *ῥήγ-νυμι* and drawing therefrom vast picturesque force, but not necessarily derived from it. Compare with it another phonetically resembling word, *ῥαχis*, the backbone (of an animal), the ridge (of a mountain). It also derives a picturesque jaggedness from its connection with *ῥήγνυμι*, but in this case clearly without etymological justification, because its real English cognate seems to be the word *ridge*, Anglo-Saxon *hrycg*, the back.

A Latin form here also claims attention. It will have been noticed that the perfect tense *freg-i* has been taken as the typical Latin form of the root BHRAG, because it presents no modification of form which cannot be fairly accounted for; whilst the present tense, *frang-o*, contains a nasal element whose origin is not clear. To say that it is derived from a more primitive form *frag-o*, by nasalization, is not quite a satisfactory explanation. The probability that such a primitive form existed is very great, not only from Grimm's law, but from the actual survival of forms such as *frag-or* and *re-frag-or*, which seem to postulate it. But what is meant by the nasalization of such a form? If nasalization means simply the addition of *n*, then the assertion that *frag-o* becomes *frang-o* by nasalization is only a worthless truism. If on the other hand it means that the Latin language was always at liberty to nasalize its stems, or any class of them, it is obviously untrue. There is no regular formative process known to the classic dialect of Latin by which the *n* can be accounted for. It is at best a dialectal, possibly even an unrelated or foreign, form which at some period gained an entrance into Latin by the help of the older *frag-o*, and then by dint of some superiority in its felt expressiveness superseded the word under whose patronage it had first made its way. We have only to consider what a mass of ostensibly nasalized forms we could catalogue in

English, if the early history of our language was as scanty as that of Latin, in order to see that the supposed process of nasalization must be regarded as mythical unless it can be historically confirmed. The grain of truth which it contains is that which has been already insisted on, that the additional presence of the nasal is unable to prevent the older word from exerting a very powerful attraction upon the younger, and effecting its speedy entrance or re-entrance into the language.

Granting even that it might be really a re-entrance (from some nasal-loving dialect), it would still be true that the way for its return was made clear, not by etymology, but by mere phonetic attraction.

If, then, the root BHRAG still maintains itself as the head of a powerful family of living English words it may be fairly said that in every instance outside those of direct and palpable derivation, it owes their attachment to the force of phonetic attraction. Every example, from the re-attachment of cognate words like *brick* and *bray* and probably *frango*, to the attraction of utterly alien words like *broach* and *fractionous*, is found to owe its existence to the same force.

Such is the result of the examination of the root BHRAG and its adherents. But if we choose a root whose history runs down, not through the polite literature of Greece and Rome, but through obscure popular and barbarous dialects, the results will bear much more strongly upon the probable life of roots in Aryan and post-Aryan antiquity: and it will be interesting to note whether in this case the evidences of phonetic attraction are greater or less.

Let us take the root BHALGH, to bulge, which ought in the regular course of things to yield us English forms in *balg-*, or something differing only from that by the normal course of vowel-change. It will be also quite right to keep a look-out for forms which might conceivably be ranged under an English type *bag-* or *bal-*. These minor radicals are very likely indeed to be found growing alongside of a type like *balg-*; yet it would be rash to say that they might grow *out of* it.

Now that we are familiar with the power to produce parallelisms of this kind which is possessed by mere phonetic attraction, such expressions as “derived” or “weakened” or “syncopated” stems seem to convey unwarranted assumptions of processes whose existence or possibility we are quite ignorant of.

Setting aside all regular grammatical derivatives, which are both few in number and for the present purpose unimportant, we find ourselves able to assemble so goodly a concourse of words resembling the types named that, if English were a language without a history, we might easily imagine that this whole triform family had descended to us from Aryan times. Resembling the first or full type we find *bulge*, *bilge*, *bulk*, *belch*: the second—*bag*, *big*, *budget*, *baggage*: the third—*bellows*, *billow*, *belly*, *boil*, *ball*, *bole*, *bale*, *bowl*, *bolster*, *ballot*, *bald*, *boulder*, *bullet*. But the following tabulated list puts a very different face upon the matter:—

Found in English A.D.	Word.	Earliest English form.	Earliest English meaning.	Origin traceable to
1000	belch	<i>bealc-ian</i>	belch, ejaculate	English—
„	bellows	(<i>blást-</i>) <i>belig</i>	(blow-) bag	Common Teutonic.
„	belly	<i>belig</i>	bag, pod	„ „
„	boil (sb.)	<i>býl</i>	tumour	„ „
„	bowl ¹	<i>bolu</i>	bowl, basin	„ „
„	bolster	<i>bolster</i>	pillow	„ „
1230	bulge	<i>bulge</i>	bag, pouch	French—Gaulish.
„	bag	<i>bagge</i>	bag	Scand. ?
1297	bald	<i>bullede</i>	rotund, hairless	Eng. from <i>ball</i> or Welsh ?
1300	big	<i>big</i>	stout, strong	dialectal—Scand. ?
„	ball	<i>bal</i>	globe	Scand. } Com.
1325	bale	<i>bale</i>	bale	Fr. or Flem. } Teut.
1300	boulder	<i>bulder</i>	cobble-(stone)	dialectal—Scand. ?
„	boll	<i>bolle</i>	bubble	variant of <i>bowl</i> . ¹
1314	bole	<i>bole</i>	tree-trunk	Scandinavian.
1413	bowl ²	<i>boule</i>	ball	French—Latin.
1430	baggage	<i>bagage</i>	baggage	French—Romanic.

Found in English A.D.	Word.	Earliest English form.	Earliest English meaning.	Origin traceable to
1440	bulk	<i>bolke</i>	a heap	Scandinavian.
1450	budget	<i>bourgette</i>	bag, pouch	French dim. of <i>bulge</i> .
1513	bilge	<i>bilge</i>	hull (of ship)	variant of <i>bulge</i> .
1549	ballot ¹	<i>ballot</i>	voting ball	Ital. dim. of <i>ball</i> .
1552	billow	<i>bellowe</i>	billow	Scand.—Tent.
1557	bullet	<i>bollet</i>	cannon ball	French dim. of <i>bowl</i> ²
1865	ballot ²	<i>ballot</i>	small bale	„ „ <i>bale</i>

Instead of finding that our three leading types go all straight back to Aryan antiquity, we find ourselves unable to trace the *bag-* forms back to the Anglo-Saxon at all, nor can we accept *bealci-an* as a normal representative of the radical *bulg-*. It is the subordinate form *bal-* which alone finds full and strong representation in the earliest English. Not that the complete root *bulg-* is totally absent: it is found in the now long extinct verb *belg-an*, to swell with rage, but it is not a familiar power in the language like its so-called weaker derivative, *bal-*.

The subsequent history of the group quite accords with these beginnings. The existence of such a compact body of Anglo-Saxon words of one type and meaning facilitates the adoption of more. Eighteen such words are here catalogued; but it is instructive to notice that *only one* of them turns out to be in any way a derivative or variant of any of the original six. Yet they markedly adhere to the same phonetic type and to the same class of meanings, insomuch that the majority of them might have easily been conjectured to have etymological relations to the root *bal-*, if the materials for historical research had not existed.

These facts cast a strong light backward upon the original group which is found existing in Anglo-Saxon. What reason have we to suppose any greater community of origin in these words than in their successors, or any more filial principle of growth in Anglo-Saxon than in Early English? Would not fuller knowledge have shewn the same diversity of origin in them also?

These are questions which cannot be answered, but the fact that they can be reasonably asked ought to inspire caution in asserting relationship between the words which seem to range themselves under the same etymological radical, unless they exhibit, at the least, a form and meaning which can be exactly accounted for, either by phonetic law or by grammatical derivation. It is clear that even then we may easily admit some relationships which have no right to be admitted.

The groups often hitherto assumed to be etymological turn out to be largely phonetic, nor is such a group much less stable or permanent than an etymological one. The present example would show it to be even more so. The death of the A.S. verb *belg-an* left two of the three main divisions of the great BHIALGH tribe extinct in English, and powerless to revive by any process of etymology. But the still remaining link of sound helped back the *balg*-forms, and these in turn, losing their *l* in forms like *bouge* and *budge* (for *bulge*) may have helped back the *bag*-forms: and it is thus possible that this ancient family of words now at length finds itself reconstituted in English by the same force which first, in all likelihood, created it, the force of phonetic attraction.

Some assumptions are involved here which it is best to state. One is that the variability of Keltic consonants might permit the *b* of *bulge* to be identified with Aryan BH: and the other is that the *bag*-forms, or some of them, really go back through Scandinavian to a Teutonic or Aryan source.

Yet the reconstituting force, after all, was not etymological but phonetic; and having by this example shown that ancient roots continue to grow in modern times by phonetic attraction, we will endeavour to show, finally, that their very origin may be sometimes due to the same cause.

It has already been hinted that there are signs of the growth of new and indigenous word-families in English during the historical period. A list of such a family is given below, which seems to cluster round, rather than to grow out of, the root syllable *bom-*.

Found in English.	Word.	Earliest English form.	Earliest English meaning.	Origin.
1225	bounce	<i>bunse</i>	to thump, to bang (to rebound, not till 1519)	prob. imitative.
1280	bob	<i>bob</i>	to pommel	prob. imitative.
1325	bunch ¹	<i>bonche</i>	a hunch, a hump	„ „
1362	bunch ²	<i>bonche</i>	to thump, to punch	„ „
1387	bun	<i>bom</i>	part of the body	unknown, cf. <i>bunch</i> ¹
1430	bombard	<i>bumbard</i>	a kind of cannon	French—Latin.
1440	boom	<i>bombon</i>	to hum or boom	imitative.
1553	bombast	<i>bombage</i>	wadding	Fr.—Lat.—Greek.
1566	bump	<i>bump</i>	to cause to swell (1611, to strike heavily)	imitative.
1588	bomb	<i>bome</i>	an explosive	Spanish—Latin.
1593	bound	<i>bound</i>	to leap	French—Latin.
1597	bumble	<i>bombill</i>	buzzing, bluster	imitative.

The first thing which strikes us on scanning these particulars is that the group is decidedly not Aryan; it not only appears to arise without the aid of either imported or inherited models, but it is without any clear Aryan prototype at all. The next thing worthy of remark is that its origin is even more purely phonetic than it appears to be: for when we trace back the four apparent exceptions we are led straight back in two cases to the imitative Latin word *bomb-us*, Greek *βόμβος*, a booming sound; in the case of *bound*, which is the French word *bond-ir*, we find a wonderful parallel to the English *bounce* and *bump*, for its early meaning in French is to *resound*; and in the case of *bombast* we have an apt instance of an uncompleted phonetic and historical attraction, from a totally alien source, in actual operation under our eyes.

The third point which arrests attention is the practical identity of the radical syllable in nearly all the early forms, coupled with the absence of any vestige of an etymological relationship. There is not a word upon the list which can clearly be said to be a variant or a derivative of any other of them. Can we suppose then that there is no kind of unity between

them? Decidedly not; but it is only such a unity as we might fairly expect to be developed by phonetic attraction, and hardly in any other way.

It will be noticed, perhaps, that there is not the same consonance in the column of meanings that there was in the BHALGH class: but this again admits of partial explanation on the hypothesis of attraction. The growth of that class had a very firm and definite starting point, in five strong Saxon words, all meaning a rotund body of some sort; and the result is seen in a column of meanings adhering most remarkably to that general type down to the present day: whilst the meanings on the present list, though fewer, embody at least five logically distinct ideas,—those of a dull continued sound, a dull sudden sound, a heavy blow, a rebound, and a lump or hunch. But though logically distinct they are all very obviously associated in nature except the last; and Professor Skeat conceives even that also to arise from natural association, through the *swelling* which is the result of a heavy blow. Nor can it be considered unnatural that, in the absence of anything which could limit them to a fixed type of meaning, the signification of these imitative words should wander over all the phenomena with which their sound was intimately associated, and that they should actually seem to countenance each other in these wanderings. But if they had found a solid body of English words already attached exclusively to one of these meanings the result might have been different. And if the type had had its origin in the same antiquity as the root BHALGH it is also possible that the struggles of the intervening ages would have led in this case also to the more decisive predominance of a single meaning, and to the banishment or atrophy of the remainder.

We have now pursued the subject of phonetic attraction as far as it can conveniently be pursued by itself. We are already at a point where the case is complicated by questions of intellectual association; and some treatment of that subject would certainly be necessary before any attempt was made to

discuss the question of roots in its fullest extent, seeing that a very large number of them are not of that phonetic and kinetic type of meaning which alone can be accounted for by direct imitation.

But the minor task which was proposed at the outset is now complete, and it will be useful in conclusion to summarize the results attained. It is here maintained that every word in a language, particularly if it be a word of comparatively rare employment and undefined meaning, is subjected on every side to attractions proceeding from all words possessing any community of form and import, and that these attractions continually tend to draw it into still closer conformity: that the chief result of this tendency has been to draw words together into clusters of a more or less resembling form and signification, and its chief office still is to keep these assemblages intact: that this, its statical effect, is liable to be overlooked, being commonly ascribed to etymological or quasi-etymological causes: that its exceptional effects in changing and removing the meanings, and occasionally the forms, of words are nevertheless very striking: that they are to be clearly traced in every class of cases where the hypothesis of attraction would teach us to look for them: that the attraction set up by form needs but a very slight resemblance of meaning in order to make itself sensibly felt: that, as a rule, this attraction multiplies itself, by creating an increased resemblance of signification: that this is seen much better in the popular vocabulary than in words which possess any literary or scientific fixity: that the theory applies therefore still more strongly to Aryan or paulo-post-Aryan times than to modern literary ages: that phonetic attraction had probably a good deal to do with the growth of Aryan roots, or some of them: that modern example shews how a tribe of words owning the same common radical may grow up under purely phonetic influences without any ostensible etymological process: that in fact it seems to be the first corollary from the doctrine of phonetic attraction that some roots at least have grown, not, as the name would imply, from

within, but like a sand bank or a crystal, from the continual attraction and addition of similar parts from without.

It remains only to add that, as this thesis is put forward as a study in English philology, the argument and the instances are confined as much as possible to the English language, but it is believed that the conclusions will hold good for other languages in the degree of their similarity. The author submits his conclusions to that process of natural selection and survival of the fittest which rules as much the fate of philological theories and of Aryan word-clusters as of other sublunary things.

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